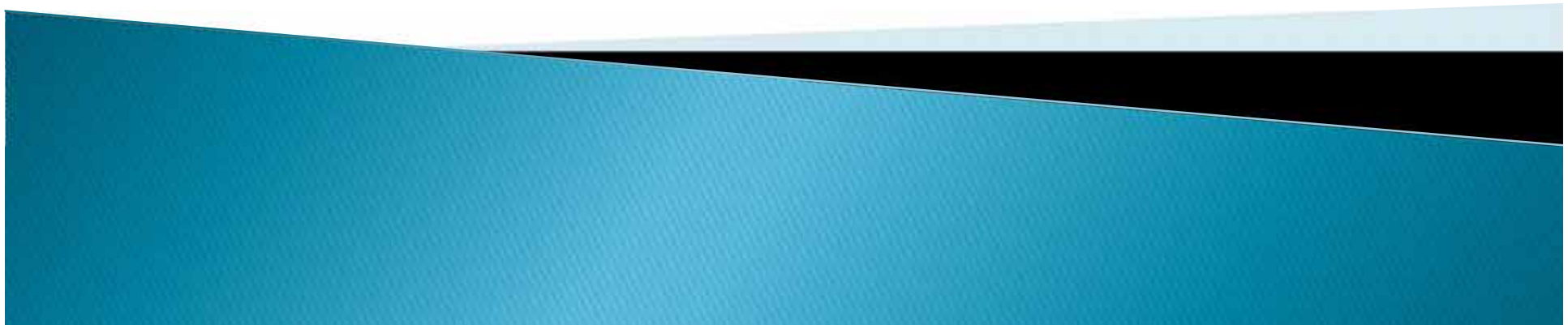




Opportunities and Pitfalls of Biomass Heating in the Horticultural Sector

National Protected Crops Conference and Trade Show 2014



Agenda

1. Filtrex Overview
2. Introduction to Biomass
3. Benefits of Biomass
4. Pitfalls of Biomass
5. Finance
6. Case Studies



Filtrex Overview

History:

- Filtrex is an engineering company that was established 2002 to service the wood processing industry, but primarily to focus on the emerging biomass and alternative fuel industry.
- Filtrex are leading suppliers of biomass boilers to the Irish market since 2002
- Filtrex offer turnkey solutions

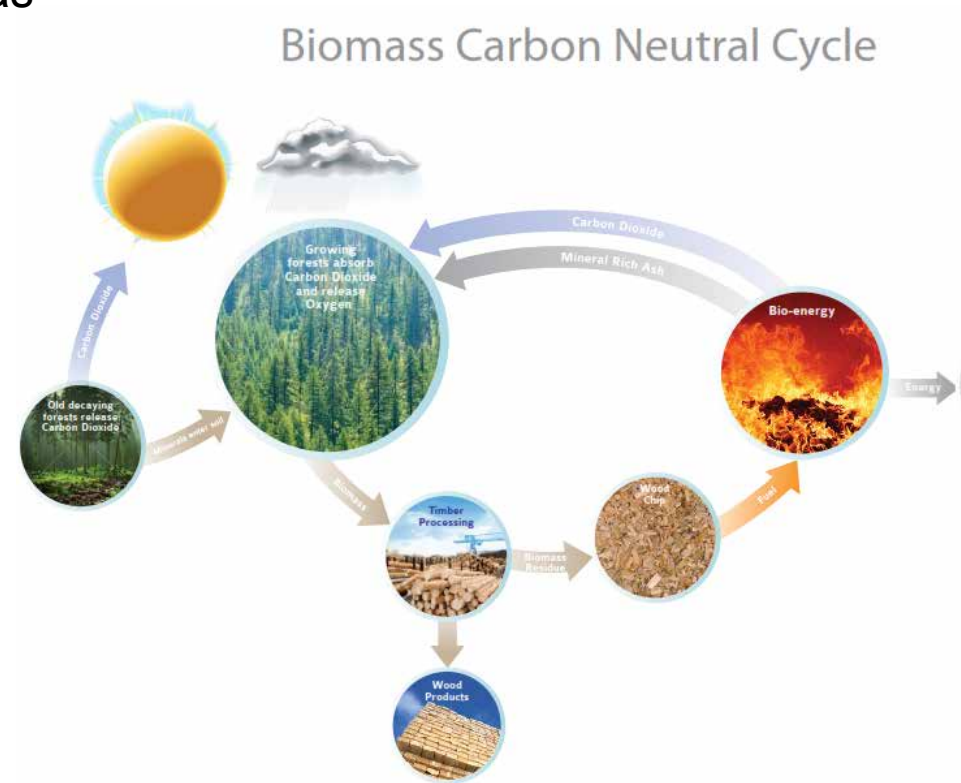
The Main Areas of Business:

- Biomass Boilers and Heating Systems
- District Heating Systems
- Briquette Plants
- Shredding & Waste Handling Technology



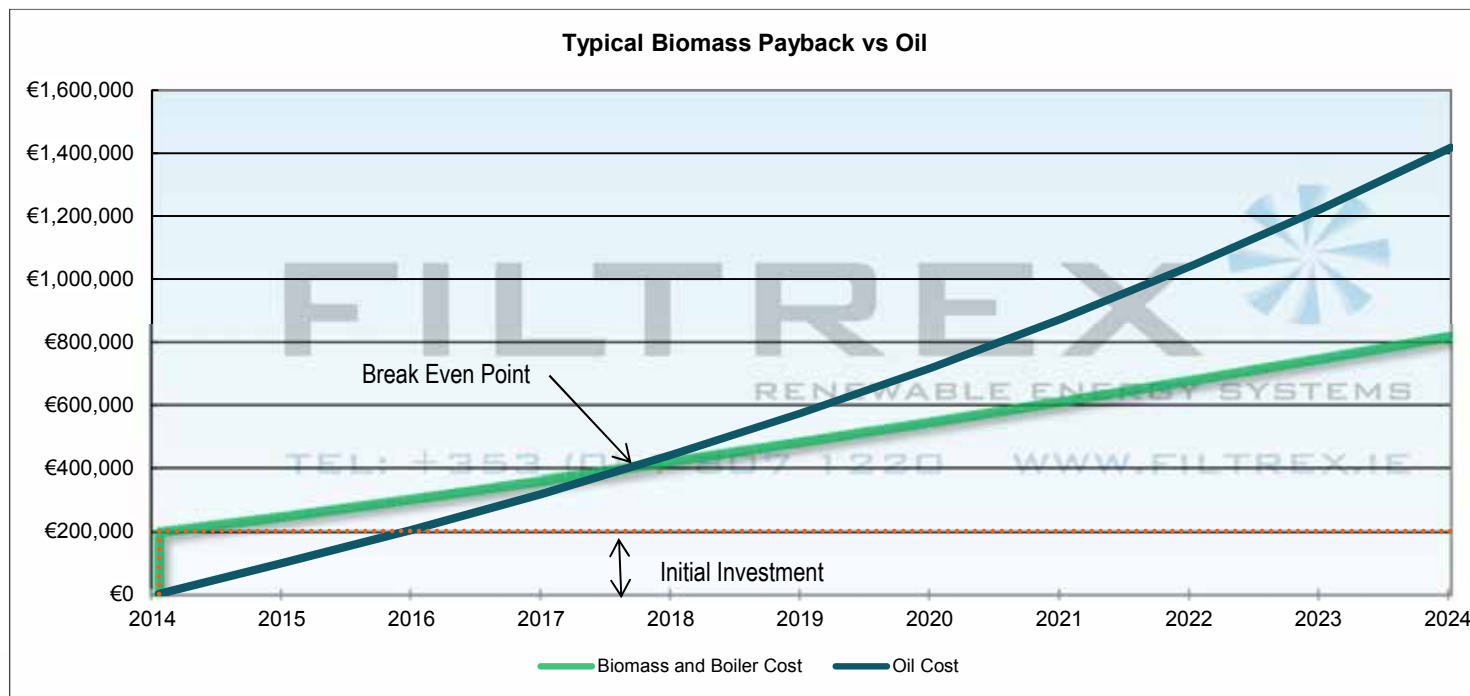
Introduction to Biomass

- ▶ Biomass is organic material used as energy.
- ▶ Common Biomass:
 - Wood, Straw, Miscanthus, Willow.
- ▶ Common Types:
 - Chip, Pellet, Briquette, Log Wood
- ▶ Biomass is often close to carbon neutral



Opportunities in Biomass

- ▶ Reduced Monthly Fuel Spend (compared to Oil and LPG)
- ▶ Secure Fuel Costs for the future
- ▶ Benefits Local Economy, Locally Sourced Fuel
- ▶ Carbon Neutral Produce



Avoid the Pitfalls of Biomass

- ▶ **Know your Thermal Load**
 - Load Usage, Seasonal Variations, Historical Data, Base/Peak Load
 - Feasibility Study
 - ▶ **Fuel Quality**
 - Consistency is vital
 - Local Fuel Supplier, Transport Limitations
 - Moisture Content, Particle Size, Calorific Value
 - ▶ **Fuel Storage**
 - Should be able to take full load from Fuel Supplier
 - Boiler feed-in capable of using entire storage area
 - ▶ **Boiler Selection**
 - Versatile boiler
 - Don't be restricted to one fuel type or one moisture content
 - ▶ **Installation and Integration**
 - Contractor with proven track record
 - Integration with existing system is key
 - Maintenance contract
- ❖ Filtrex successfully designs around these pitfalls to determine an individual solution for every client.

Finance

Converting to Biomass or Building a new Installation with Biomass Energy is more capital heavy than choosing gas or oil. There are a number of Finance options available:

- ▶ RHI Scheme (pending announcement)
- ▶ SEAI offers grants for biomass both retrofit and new installations
- ▶ AIB Business has an Energy Efficiency Fund
- ▶ ESCO Boiler Finance
- ▶ Asset Finance

Case Study: Teagasc Athenry



Case Study: Teagasc Athenry



Case Study: Teagasc Johnstown Castle



Case Study: Teagasc Johnstown Castle



Case Study: Johnson & Johnson DePuy



Case Study: Johnson & Johnson DePuy



Case Study: Abbvie Cork Mobile Unit

